

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (currently amended). A proprietary communication protocol for use in a system controller that includes an application controller and a plurality of applications for controlling a plurality of device controllers on a control network by using data relating to system points that correspond to data variables in the network, said proprietary communication protocol comprising:

a plurality of predefined messages transmitted between the application controller and the applications for instructing the application controller to perform a function relating to a select system point, and for reporting to the applications in response to said instruction, instruction, said plurality of messages include a discover message transmitted from the applications to the application controller for inquiring whether the select system point is stored in a database of the application controller;

a message identification field for identifying a select message from said plurality of messages; and,

a protocol identification field for identifying said select message as being transmitted via said proprietary communication protocol.

Claim 2 (original). The proprietary communication protocol as defined in claim 1 wherein said proprietary communication protocol is embedded into a communication protocol of the control network.

Claim 3 (original). The proprietary communication protocol as defined in claim 1 further including a system point identification field for identifying the select system point.

Claim 4 (original). The proprietary communication protocol as defined in claim 3 wherein said system point identification field is a point unique identification (PUID) field for identifying the select system point by a unique identification number that is assigned to the select system point.

Claim 5 (original). The proprietary communication protocol as defined in claim 3 wherein said system point identification field is a name identification field for identifying the select system point by a user-defined name that is assigned to the select system point.

Claim 6 (original). The proprietary communication protocol as defined in claim 1 further including a priority field for determining whether data relating to the select system point can be written to.

Claim 7 (original). The proprietary communication protocol as defined in claim 1 further including a priority field for determining whether data relating to select system point can be overridden.

Claim 8 (original). The proprietary communication protocol as defined in claim 1 further including a transaction identification field for uniquely identifying said select message from the plurality of predefined messages.

Claim 9 (original). The proprietary communication protocol as defined in claim 1 further including a field for indicating whether said select message is a last message being transmitted from the application controller to the applications.

Claim 10 (original). The proprietary communication protocol as defined in claim 1 further including a field for indicating at least one element value of the select system point.

Claim 11 (original). The proprietary communication protocol as defined in claim 10 further including a field for determining a format for displaying said element values.

Claim 12 (original). The proprietary communication protocol as defined in claim 1 further including a notification field for indicating at least one type of changes in the data relating to the select system point for which at least one of the applications desires subscription.

Claim 13 (original). The proprietary communication protocol as defined in claim 12 wherein said changes include a change of value, a change of state and a change of quality relating to the select system point.

Claim 14 (canceled).

Claim 15 (currently amended). The proprietary communication protocol as defined in claim ~~14-1~~ wherein said discover message refers to the select system point via a unique identification number associated with the system point.

Claim 16 (currently amended). The proprietary communication protocol as defined in claim ~~14-1~~ wherein said discover message refers to the select system point via a user-defined name that is assigned to the select system point.

Claim 17 (currently amended). The proprietary communication protocol as defined in claim ~~14-1~~ wherein said plurality of messages include a message transmitted from the application controller to the application in response to said discover message to report that the select system point is stored in said database.

Claim 18 (original). The proprietary communication protocol as defined in claim 1 wherein said plurality of messages include a message transmitted from the applications to the application controller for subscribing for changes in the data relating to the select system point.

Claim 19 (original). The proprietary communication protocol as defined in claim 18 wherein said changes include a change of value, a change of state and a change of quality relating to the select system point.

Claim 20 (original). The proprietary communication protocol as defined in claim 18 wherein said plurality of messages includes a message transmitted from the applications to the application controller for unsubscribing for changes in the data relating to the select system point.

Claim 21 (original). The proprietary communication protocol as defined in claim 18 wherein said plurality of messages include a message transmitted from the application controller to the applications reporting of said changes in the data relating to the select system point in response to said subscription message transmitted from the applications.

Claim 22 (original). The proprietary communication protocol as defined in claim 1 wherein said plurality of messages includes a message transmitted from the applications to the application controller for overriding or writing new values in the data relating to the select system point.

Claim 23 (original). The proprietary communication protocol as defined in claim 22 wherein said overriding and writing message is accepted by the application controller if a priority of an application transmitting said message is greater than or equal to a priority of the data relating to the select system point.

Claim 24 (original). The proprietary communication protocol as defined in claim 23 wherein said plurality of messages includes a message transmitted from the applications to the application controller for releasing said priority of the data relating to the selected system point to allow an application having a lower priority than said priority of the data to override or write new value in the data relating to the select system point.

Claim 25 (original). The proprietary communication protocol as defined in claim 1 wherein said plurality of messages includes a message transmitted from the applications to the application controller for requesting query of the data relating to at least one of the system points for specified information.

Claim 26 (original). The proprietary communication protocol as defined in claim 25 wherein said query message requests a report on all system points that have a write or override priority that is greater than or equal to a specified priority level of said query message.

Claim 27 (original). The proprietary communication protocol as defined in claim 25 wherein said query message requests a report on all system points that conforms to a specified quality.

Claim 28 (original). The proprietary communication protocol as defined in claim 25 wherein said query message requests a report on all system points that a status of at least one node of the control network.

Claim 29 (original). The proprietary communication protocol as defined in claim 1 wherein said plurality of messages includes a message transmitted from the applications to the application controller for canceling a previously transmitted message.

Claim 30 (currently amended). The proprietary communication protocol as defined in claim 4 2 wherein said plurality of messages includes a message transmitted from the applications to the application controller for canceling a previously transmitted message.

Claim 31 (original). The proprietary communication protocol as defined in claim 1 wherein said plurality of messages includes a message transmitted from the applications to the application controller for instructing the application controller to query all of the data variables in the network operatively connected to the application controller to determine if any of the data variables have been overridden.

Claim 32 (original). The proprietary communication protocol as defined in claim 1 wherein each of the system points are identified by a unique numeric value.

Claim 33 (original). The proprietary communication protocol as defined in claim 1 wherein the system points are identified by a user-defined name.

Claim 34 (original). The proprietary communication protocol as defined in claim 1 wherein each of the system points include at least one element value.

Claim 35 (original). The proprietary communication protocol as defined in claim 1 wherein the system points have an assigned write priority and an override priority.

Claim 36 (original). The proprietary communication protocol as defined in claim 1 wherein the data relating to the system points are stored in a database of the application controller.

Claim 37 (original). The proprietary communication protocol as defined in claim 36 wherein said database stores user-defined data relating to the system points.

Claim 38 (original). The proprietary communication protocol as defined in claim 37 wherein said database stores a unique identification value of the corresponding data variables in the network.

Claim 39 (original). The proprietary communication protocol as defined in claim 37 wherein said database includes field for storing an address of the corresponding data variables in the network.

Claims 40-46 (canceled).

Claim 47 (new). A proprietary communication protocol for use in a system controller that includes an application controller and a plurality of applications for controlling a plurality of device controllers on a control network by using data relating to system points that correspond to data variables in the network, said proprietary communication protocol comprising:

    a plurality of predefined messages transmitted between the application controller and the applications for instructing the application controller to perform a function relating to a select system point, and for reporting to the applications in response to said instruction;

    a message identification field for identifying a select message from said plurality of messages;

    a protocol identification field for identifying said select message as being transmitted via said proprietary communication protocol;

    a field for indicating at least one element value of the select system point; and

    a field for determining a format for displaying said element values.

Claim 48 (new). The proprietary communication protocol as defined in claim 47 wherein said proprietary communication protocol is embedded into a communication protocol of the control network.

Claim 49 (new). The proprietary communication protocol as defined in claim 47 further including a system point identification field for identifying the select system point.

Claim 50 (new). The proprietary communication protocol as defined in claim 49 wherein said system point identification field is a point unique identification (PUID) field for identifying the select system point by a unique identification number that is assigned to the select system point.

Claim 51 (new). The proprietary communication protocol as defined in claim 49 wherein said system point identification field is a name identification field for identifying the select system point by a user-defined name that is assigned to the select system point.

Claim 52 (new). The proprietary communication protocol as defined in claim 47 further including a priority field for determining whether data relating to the select system point can be written to.

Claim 53 (new). The proprietary communication protocol as defined in claim 47 further including a priority field for determining whether data relating to select system point can be overridden.